

Exploring Aeronautics			
2005 Science			
Curriculum Framework			
Arkansas Science			
Grade 5			
Activity/Lesson	State	Standards	
Fundamentals of Aeronautics (145-176)	AR	SCI.5.ESS 10.5.4	Distinguish between mass and weight
Airplane Control(209-256)	AR	SCI.5.PS.6.5.4	Compare and contrast potential energy and kinetic energy as applied to motion
Airplane Control(209-256)	AR	SCI.5.PS.6.5.5	Classify real world examples as potential energy or kinetic energy as applied to motion
How an Airplane Flies	AR	SCI.5.PS.6.5.4	Compare and contrast potential energy and kinetic energy as applied to motion
How an Airplane Flies	AR	SCI.5.PS.6.5.5	Classify real world examples as potential energy or kinetic energy as applied to motion
Science of Flight	AR	SCI.5.NS.1.5.1	Make accurate observations
Science of Flight	AR	SCI.5.NS.1.5.2. a	Identify and define components of experimental design used to produce empirical evidence (hypothesis)
Science of Flight	AR	SCI.5.NS.1.5.5	Communicate results and conclusions from scientific inquiry
Integrating with Aeronautics	AR	SCI.5.NS.1.5.4. e	Interpret scientific data using (stem and leaf plots)
Scientific Method(124-144)	AR	SCI.5.NS.1.5.2. a	Identify and define components of experimental design used to produce empirical evidence (hypothesis)
Scientific Method(124-144)	AR	SCI.5.NS.1.5.5	Communicate results and conclusions from scientific inquiry
Scientific Method(124-144)	AR	SCI.5.NS.1.5.9	Define and give examples of hypotheses
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Grade 6			
Activity/Lesson	State	Standards	
Fundamentals of Aeronautics (145-176)	AR	SCI.6.PS.6.6.3	Conduct investigations of various forces using SI units (newton)
Fundamentals of Aeronautics (145-176)	AR	SCI.6.PS.6.6.7.a	Describe the effects of force (move a stationary object)
Fundamentals of Aeronautics (145-176)	AR	SCI.6.PS.6.6.7.b	Describe the effects of force (speed up, slow down or change the direction of motion)
Fundamentals of Aeronautics (145-176)	AR	SCI.6.PS.6.6.8	Conduct investigations to demonstrate change in direction caused by force

Fundamentals of Aeronautics (145-176)	AR	SCI.6.PS.6.6.9	Conduct investigations to calculate the change in speed caused by applying forces to an object
How an Airplane Flies	AR	SCI.6.PS.6.6.7.a	Describe the effects of force (move a stationary object)
How an Airplane Flies	AR	SCI.6.PS.6.6.7.b	Describe the effects of force (speed up, slow down or change the direction of motion)
Science of Flight	AR	SCI.6.NS.1.6.1	Verify accuracy of observations
Science of Flight	AR	SCI.6.NS.1.6.2.a	Apply components of experimental design used to produce empirical evidence (hypothesis)
Science of Flight	AR	SCI.6.NS.1.6.5	Communicate results and conclusions from scientific inquiry
Scientific Method(124-144)	AR	SCI.6.NS.1.6.2.a	Apply components of experimental design used to produce empirical evidence (hypothesis)
Scientific Method(124-144)	AR	SCI.6.NS.1.6.5	Communicate results and conclusions from scientific inquiry
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Grade 7			
Activity/Lesson	State	Standards	
Science of Flight	AR	SCI.7.NS.1.7.2.a	Analyze components of experimental design used to produce empirical evidence (hypothesis)
Science of Flight	AR	SCI.7.NS.1.7.5	Communicate results and conclusions from scientific inquiry
Science of Flight	AR	SCI.7.NS.1.7.9	Compare and contrast hypotheses, laws, and theories
Scientific Method(124-144)	AR	SCI.7.NS.1.7.2.a	Analyze components of experimental design used to produce empirical evidence (hypothesis)
Scientific Method(124-144)	AR	SCI.7.NS.1.7.5	Communicate results and conclusions from scientific inquiry
Scientific Method(124-144)	AR	SCI.7.NS.1.7.9	Compare and contrast hypotheses, laws, and theories
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Grade 8			
Activity/Lesson	State	Standards	
Science of Flight	AR	SCI.8.NS.1.8.2.a	Evaluate the merits of empirical evidence based on experimental design (hypothesis)
Science of Flight	AR	SCI.8.NS.1.8.3	Formulate a testable problem using experimental design
Science of Flight	AR	SCI.8.NS.1.8.11	Evaluate the merit of hypotheses, laws, and theories
Scientific Method(124-144)	AR	SCI.8.NS.1.8.1	Justify conclusions based on appropriate and unbiased observations

Scientific Method(124-144)	AR	SCI.8.NS.1.8.2.a	Evaluate the merits of empirical evidence based on experimental design (hypothesis)
Scientific Method(124-144)	AR	SCI.8.NS.1.8.3	Formulate a testable problem using experimental design
Scientific Method(124-144)	AR	SCI.8.NS.1.8.7	Communicate results and conclusions from scientific inquiry following peer review
Scientific Method(124-144)	AR	SCI.8.NS.1.8.11	Evaluate the merit of hypotheses, laws, and theories